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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,548	12/01/2000	Noboru Okada	OGW-0019	3094

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,548

Applicant(s)

OKADA ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-21-03 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 9-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In new claim 9, lines 13-14, the reference to the band rubber parts being "either upstream or downstream" has not been shown to be described in the original disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. Further, it is not entirely clear what is meant by this as will be set forth in a subsequent rejection.

New claim 9, lines 14-15 define that "at least" the bead setting and bead transferring means are movable along the forming path. It however is not seen where the original disclosure describes that "at least" these two parts of the apparatus are so

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movable. In other words, while it is clear that these devices are described as movable, it is also apparent that other devices are also explicitly described as movable. The new "at least" reference however now defines or describes embodiments where only these are movable and it is submitted that this was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. This same new matter is likewise present for the analogous language in claim 12, lines 2-3.

At 6-7 lines from the end of claim 9, it is described that the bead supply means supplies "one bead at a time" to the bead setting means. It however is not seen where the original disclosure describes this and as such, it is not considered to be described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. In fact, it is noted that the original disclosure seems to contradict this new language in defining that a "selected one pair of completed beads are supplied to the bead setter 44 through a delivering arm 94."

Claims 10 and 11 define that injection units are accessible to *lateral sides* of the drums. It is submitted however that this was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. Note that it is not seen where access to a "lateral side" of the drum is described or contemplated.

Claim 11 describes the tread rubber supply means includes "at least a second pair" of injection units. It however is not seen where the original disclosure describes this and no support has been pointed to. It is therefore considered that this is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is new matter. Note that "at least a second pair" indicates that other pairs are contemplated - this was however not described. It is further not entirely clear why the open-ended "at least" reference in claim 10 should also be held to be described in the original disclosure. In particular, although there are plural pairs of injectors at the band drum, applicant should identify why this should be held to describe the now open-ended "at least" language.

Claim 14 describes that "at least one of " the band forming means and the belt/tread forming means is movable along the rails. It however is not seen where the original disclosure describes this and no support has been pointed to. It is therefore considered that this is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is new matter. Note that the new use of "at least" in this context is describing embodiments that were not described (e.g. where only one is movable).

4. Claims 9-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In various parts of claim 9, reference is made to several of the movable elements (bead setter, belt transfer) being "upstream", etc. Since however these elements when in at least part of their operative position may not meet this requirement, a potential ambiguity is raised in defining the positional relationship of an element that in fact moves and may not be in that relationship. It seems at least this should be rephrased as a capability or as an overall spatial definition of the system at some specific defined point in the processing to avoid ambiguity (but original descriptive support must be present and pointed to for any change).

In claim 9, lines 13-14, as noted above, the reference to the band rubber parts being "either upstream or downstream" is indefinite and confusing. What are these upstream/downstream relative to? Further, if this is in reference to the band forming means, insofar as these devices only operate on the carcass while it is having the band being formed, it would seem incorrect to define that it is upstream or downstream relative to the band forming means as it is in fact always at the band forming station.

In claim 9, line 22, no antecedent has been established for "the band transferring means".

2. Claims 1, 3-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irie (US 4,468,267) taken with JP 59-93345 to Yokohama, Brown et al. (US 5,554,242), Laurent (US 4,963,207), EP 958,913 to Okada et al. and EP 624,456 to Krupp and optionally EP 875364 to Pirelli, and further in view of Nakahama et al. (US 4,369,086 - newly cited) and Brey et al. (US 3,849,231 - newly cited) and/or Mukae et al. (US 4,553,894 - newly cited).

All the previously cited references are applied herein for the same reasons as set forth in the last office action. With respect to the new inclusion of specifics of the bead supply of plural kinds of beads, it is first again noted that, given that it is considered to be known and desirable to build different tire sizes/types on the same tire building line, it is considered that the ordinary artisan would have readily and certainly appreciated that different beads would likely be required and thus preparation thereof as well as a bead supply means that can hold the necessary various tire bead types would have been seen to have been necessary and obvious. In other words, if one is trying to build different tires on the same line, it would seem not beyond the skill level of the ordinary artisan to appreciate that provision of the requisite beads that will be needed would have been necessary and obvious. Further, since it is apparent that among the known advantages of the various known building/supplying sub-processes of the other references is the ability to more easily adapt to changing size requirements for the components (and thus also thereby avoid the need for more storage of more different components) when different tires are to be built, the artisan would have been particularly motivated to provide such in the context of a system that is designed to be able to easily build different tires with minimal changeover requirements. EP '456 to Krupp was cited to show that the artisan understands the need and desire to design a bead supply means that can easily adapt to changing bead sizes and thereby enables rapid size changes – note the abstract. While this device would provide added flexibility beyond what is needed in a system that is limited to only single bead inside diameters, it

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is still clear evidence that the artisan is well aware of the need to adapt to differing beads.

The newly cited references provide additional detail of the known devices and processes used to supply beads including the well known use of storage means for a plurality of beads in the vicinity of the building line. Note also the indication in the background of Nakahama et al. that it is well known for the artisan to manually take a bead from a supply peg near the former and apply it to the bead setter (col. 1, lines 38+), it being apparent that at present the process claim 5 does not even distinguish manual selection/supply of the desired bead. In any event, the remainder of this reference as well as the other references clearly evidence that well known nature of employing various means to bring the bead to the bead setters from a supply rack/device.

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US 5,399,225) taken in view of JP 59-93345 to Yokohama Rubber, and Brown et al. (US 5,554,242) and/or Laurent (US 4,963,207) and optionally Nakahama et al. (US 4,369,086 - newly cited), Brey et al. (US 3,849,231 - newly cited) and/or Mukae et al. (US 4,553,894 - newly cited).

Miyamoto et al. clearly disclose a tire building system including a band forming drum (1), a band transfer and bead setter (4), a shape forming means including a shape forming drum (2), a belt transfer (5) and a belt/tread forming means including a belt/tread drum (8). Further, these devices are adapted to be along a single path and are oriented or are orientable to meet all the claimed positioning requirements including

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movement of the shape forming means in a perpendicular direction (e.g. col. 4, lines 37-47 and the figures). Further, perpendicularly arranged servicers for all the various tire components (belt, tread, band) are also clearly suggested (as well as normal and typical in tire building). It is not considered that the claimed requirement for band rubber parts supply means and tread rubber parts supply means defines over any means for applying rubber components to the tire, this including almost every tire component and thus would not seem to define over the normal and typical servicers. In any event, even if read to be directed to require a band (and tread) rubber part supply means in the form of a device adapted to form and wind a rubber strip to a desired profile, it is again noted that in this art, it is well known and established that direct strip winding of the various rubber parts of the tire, including those of the first stage tire band (as well as the *extremely* well known strip winding of treads), is advantageous in terms of reducing the need for intermediate component storage (and all the problems associated therewith) as well as facilitating quick tire size/type changeover – note esp. cols. 1-2 of Brown as well as col. 2, lines 15-24 of Laurent. To provide band and tread means to allow direct strip winding such components would therefore have been prima facie obvious and lead to only the expected results.

As to specific means for the carcass and innerliner, it would have been readily apparent to the artisan that such is almost always required and would be provided for the band servicers in Miyamoto. JP '345 further specifically suggests and renders obvious providing these devices to be adjacent one another as claimed. Note also the last office actions for a complete description of this reference.

As the bead supply (104) is laterally adjacent the building line, the bead supply is necessarily along a path perpendicular to the forming line. Specifics of the actual supply step are not given but it does not appear that any way to effect this including manually from the supply means to the setters would be defined over by the present claims. In any event, even if read to require specific automated means to actually carry the bead from the supply to the setter, such would have been obvious in light of the well known use of such in this art - note again Nakahama et al., Brey et al. and Mukae et al. for the readily apparent advantages

Thus, in summary, it should be stressed that Miyamoto et al. is considered to show almost every significant feature as required by claim 9, the other references added in most respects merely to evidence the conventional nature of some details not specifically provided by Miyamoto et al.

As to claims 10 and 11, the normal and typical extrusion used in formation of strips for strip winding tire components would seem to read on the claimed use of an "injection unit" - in any event, a piston or plunger type unit is also known and used in this art to apply precise quantities of rubber - note Laurent (esp. col. 4, lines 3+ - note that this extruder uses a piston), use of such being therefore obvious to allow more precise rubber application.

6. Claim 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US 5,399,225) taken in view of JP 59-93345 to Yokohama Rubber, and Brown et al. (US 5,554,242) and/or Laurent (US 4,963,207) and optionally Nakahama et al. (US 4,369,086), Brey et al. (US 3,849,231) and/or Mukae et al. (US

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4,553,894) as applied to claims 9-11 above, and further in view of Sumiuchi et al. (US 5,141,587) and Loeffler et al. (US 4,314,864).

As to claims 12-14, Miyamoto et al. clearly discloses what are called center bases 16 and 18 upon which the various devices slide. It is not clear if these are "rails". Such however are extremely well known in this art in almost the same role and would have been an obvious substitute - Sumiuchi and Loeffler et al. are exemplary of the well known use of rails, Loeffler et al. further providing additional motivation to provide a movable drum if desired in order to allow application of plural components.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US 5,399,225) taken in view of JP 59-93345 to Yokohama Rubber, and Brown et al. (US 5,554,242) and/or Laurent (US 4,963,207) and optionally Nakahama et al. (US 4,369,086), Brey et al. (US 3,849,231) and/or Mukae et al. (US 4,553,894) as applied to claims 9-11 above, and further in view of Wolfe (US 4,351,458) and Nelson et al. (US 2,918,177).

Miyamoto et al. does not provide specifics of the bead supply means. It however is well known to hold beads on support pegs or racks - e.g. note col. 1, lines 38+ of Nakahama et al. as well as Mukae et al. Further, bead racks (1248) of Brey et al. would seem to include radial arms from a center support. In any event, in the art of storage racks, it is extremely common and well known to include a rotatable rack with radial arms for various items to allow better access and additional storage - Wolfe et al. and Nelson et al. are exemplary, it being considered obvious to utilize such if desired to allow more beads and/or different types of beads to be stored at the bead supply rack.

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8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US 5,399,225) taken in view of JP 59-93345 to Yokohama Rubber, and Brown et al. (US 5,554,242) and/or Laurent (US 4,963,207) and optionally Nakahama et al. (US 4,369,086), Brey et al. (US 3,849,231) and/or Mukae et al. (US 4,553,894) as applied to claims 9-11 above, and further in view of Wolfe (US 4,351,458) and Nelson et al. (US 2,918,177) as applied to claims 9-11 and 15 above, and further in view of EP 958,913 to Okada et al.

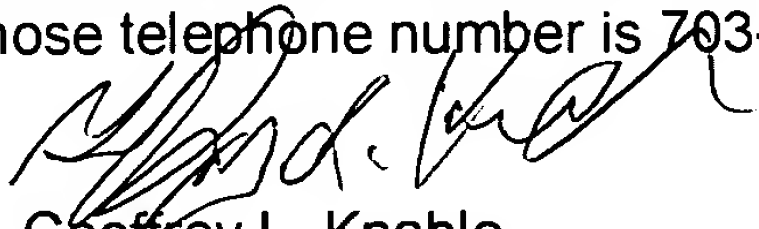
Claim 16 defines that the belt supply means are operative to supply/cut belts from plural pieces – such processing is however known, desirable and obvious in this art as a known way to avoid the need for storage of plies for every tire size – note EP 958,913 to Okada et al. (esp. cols. 1-2 and fig. 1).

9. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 703-308-2062. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
June 28, 2003